

REMARKS

This Amendment is filed in response to the Office Action dated September 29, 2004, which has a shortened statutory period set to expire December 29, 2004.

Rejections Under 35 U.S.C. 102

Claims 1, 5, 6, 10, and 19 stand rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,128,595, issued October 3, 2000 to Ruber (hereinafter "Ruber"). Applicant respectfully traverses these rejections.

Claim 1 recites a method that comprises **"associating a statistic with each grammar option that approximates a first probability of uttering that grammar option."** (Emphasis added.) As noted in the specification as originally filed, "[a]n attribute of the options (an easily obtainable statistic) is found to create a basis for a predictability model ... [and] should roughly correspond to the (expected) utterance frequency." (Specification, paragraph 9.) For example, for a city/state grammar, "the population of each city is one attribute that may be used to estimate the weight to be assigned that city/state pair (i.e., option)." (Specification, paragraph 20.)

Ruber does not teach or suggest any "statistic ... that approximates a first probability of uttering that grammar option" as recited in Claim 1. Ruber does mention "attributes", but defines "attributes" to be "words or word sequences". For example, Ruber describes "allowing the same day or the same time to be indicated by way of **different attributes, i.e. different words or word sequences.**" (Ruber, col. 1, lines 62-64.) (Emphasis added.)

Thus, for at least this reason, Claim 1 is allowable under 35 U.S.C. 102(e) over Ruber. Claims 5, 6, and 10 depend from

Claim 1, and are therefore allowable under 35 U.S.C. 102(e) for at least the same reasons that Claim 1 is allowable. Accordingly, Applicant respectfully requests reconsideration and allowance of Claims 1, 5, 6, and 10.

Claim 19 recites "means for **associating a statistic with each grammar option that approximates a first probability of uttering** that grammar option." (Emphasis added.) Thus, for reasons substantially similar to those presented above with respect to Claim 1, Claim 19 is allowable under 35 U.S.C. 102(e) over Ruber. Accordingly, Applicant respectfully requests reconsideration and allowance of Claim 19.

Rejections Under 35 U.S.C. 103

Claims 11, 20, 22-25, and 28-36 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent No. 06-266385, published September 22, 1994 for inventor Ryosuke Hamazaki (hereinafter "Hamazaki"), and further in view of Ruber. Applicant respectfully traverses these rejections.

Claim 11 recites:

A method of **determining weight for a grammar option** in a speech recognition grammar, the method comprising:
 determining a correct score and a best competitor score for each utterance in an utterance training set;
 comparing the correct score to the best competitor score for each utterance; and
 increasing the weight of a first grammar option associated with the correct score by a first amount.
(Emphasis added.)

Performing a comparison and weight adjustment in this manner beneficially allows an "utterance training set [to be] iterated ... to converge on a solution for grammar weights of options." (Specification as originally filed, paragraph 12.) By "increasing the weight of a first grammar option associated with the correct score" as recited in Claim 11 can "increase the

likelihood that the ASR system chooses that option when translating the associated utterance." (Specification, paragraph 30.)

In contrast, Hamazaki teaches a method in which:

[T]he score between **an input speech pattern whose featured are extracted by an acoustic analyzing means 2** and the score to **a last correct answer input speech pattern ...** [provide] a recognition result ... [such that] when the **recognition result is not correct**, a user input means 9 **grants a correct answer label to the input speech pattern.** (Emphasis added.) (Hamazaki, abstract.)

Thus, Hamazaki is directed only towards acoustic information, rather than the "weight for a grammar option" recited by Claim 11. As noted in the specification as originally filed, "[t]he score of an option is based on two kinds of information: acoustic information and grammatical information." (Specification, paragraph 3.)

Furthermore, even assuming, arguendo, that the "acoustic analyzing" of Hamazaki can be extended to "determining weight for a grammar option" as recited in Claim 11, Hamazaki still does not teach "comparing the correct score to the best competitor score ... and **increasing the weight of a first grammar option associated with the correct score by a first amount**" as recited in Claim 1. In fact, Hamazaki actually teaches away from any methodology that involves weighting by explicitly stating that when a "recognition result is not correct, a user input means 9 grants a correct answer label to the input speech pattern [to replace the 'last correct answer input speech pattern']." (Hamazaki, abstract.) Ruber does not remedy these deficiencies of Hamazaki.

Thus, for at least the above reasons, Claim 11 is allowable under 35 U.S.C. 103(a) over Hamazaki in view of Ruber. Accordingly, Applicants respectfully request reconsideration and allowance of Claim 11.

Claim 20 recites:

A software program for **determining weight for a grammar option in a speech recognition grammar**, the program comprising:

means for **determining a correct score and a best competitor score** for each utterance in an utterance training set;

means for **comparing the correct score to the best competitor score** for each utterance; and

means for **increasing the weight of a first grammar option associated with the correct score** by a first amount. (Emphasis added.)

Thus, for at least the reasons described above with respect to Claim 11, Claim 20 is allowable under 35 U.S.C. 103(a) over Hamazaki in view of Ruber. Accordingly, Applicants respectfully request reconsideration and allowance of Claim 20.

Claim 22 recites:

A method of **determining weight for an option variant of a grammar option in a speech recognition grammar**, the method comprising:

determining a correct score and a best competitor score for each utterance in an utterance training set;

comparing the correct score to the best competitor score for each utterance; and

increasing the weight of a first option variant for a grammar option associated with the correct score by a first amount. (Emphasis added.)

Thus, for at least the reasons described above with respect to Claim 11, Claim 22 is allowable under 35 U.S.C. 103(a) over Hamazaki in view of Ruber. Claims 23-25 and 28-31 depend from Claim 22, and are therefore allowable under 35 U.S.C. 103(a) for at least the same reasons that Claim 22 is allowable. Accordingly, Applicants respectfully request reconsideration and allowance of Claims 22-25 and 28-31.

Claim 32 recites:

A method of **determining weight for an alternative pronunciation of an option variant of a grammar option for a speech recognition grammar**, the method comprising:

determining a correct score and a best competitor score for each utterance in an utterance training set; comparing the correct score to the best competitor score for each utterance; and increasing the weight of a first alternative pronunciation of an option variant associated with the correct score by a first amount. (Emphasis added.)

Thus, for at least the reasons described above with respect to Claim 11, Claim 32 is allowable under 35 U.S.C. 103(a) over Hamazaki in view of Ruber. Claims 33-36 depend from Claim 32, and are therefore allowable under 35 U.S.C. 103(a) for at least the same reasons that Claim 32 is allowable. Accordingly, Applicants respectfully request reconsideration and allowance of Claims 32-36.

Allowable Subject Matter

Applicants note with appreciation the allowance of Claims 21 and 37-44. Applicants note with further appreciation the recognition of allowable material in Claims 2-4, 7-9, 12-18, 26, and 27. However, as applicants believe that the corresponding base claims are allowable in light of the above remarks, no amendments are made in the present paper.


CONCLUSION

Claims 1-44 are pending in the present Application. Reconsideration and allowance of these claims is respectfully requested.

If there are any questions, please telephone the undersigned at (408) 451-5903 to expedite prosecution of this case.

Respectfully submitted,

Customer No.: 24488


John M. Kubodera
Attorney for Applicant(s)
Reg. No. 45,984 35,537

I hereby certify that this correspondence is being deposited with the United States Postal Service as FIRST CLASS MAIL in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on December 29, 2004.

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Date Signature: Rebecca A. Baumann